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TFW 1633

Atty. Docket No.: INGA, 004/CIP
Information Disclosure Statement
IDS filed: May 30, 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Application of: §
CONRAD § Group Art Unit: 1633
Serial No: 09/397,782 § Examiner: J. Martinell
Filed: Sept. 16, 1999 § Atty. Docket No: INGA,004/CIP
Title: IN VIVO PRODUCTION OF SSDNA USING REVERSE TRANSCRIPTASE WITH
PREDEFINED REACTION TERMINATION VIA STEM-LOOP FORMATION

TO:

Commissioner of Patents and Trademarks
PO Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING (37 CFR 1.8a)	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope, addressed to: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450	
Name: <u>Cindee R. Ewell</u>	Date: <u>May 30, 2006</u>

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

In compliance with Applicant's duty of candor and good faith, Applicant files this Information Disclosure Statement in accordance with the provisions of 37 CFR §§1.97 and 1.98 to make the references listed on the attached disclosure form PTO/SB/08 of record in the captioned application.

Also, in compliance with § 1.97, an information disclosure statement is herein filed within one of the following time periods:

- ☒ (1) the information disclosure statement is filed in the early stages of prosecution:
- ☐ within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);
 - ☐ within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
 - ☐ before the mailing of a first Office action on the merits; OR
 - ☒ before the mailing of a first Office action after the filing of a request for continued examination under §1.114;

OR,

- ☐ (2) the information disclosure statement is filed before the mailing date of any of a final action under §1.113, a notice of allowance under §1.311, or an action that otherwise closes prosecution in the application, and it is accompanied by ONE OF:

- ☐ A statement as specified under 37 CFR 1.97(e):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement; OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in §1.56(c) more than three months prior to the filing of the information disclosure statement.

OR,

- ☐ The fee set forth in §1.17(p),

OR,

- ☐ (3) the information disclosure statement is filed on or before payment of the issue fee and is accompanied by:

- ☐ The statement specified under 37 CFR 1.97(e);

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement; OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of the information disclosure statement.

AND,

- ☐ The fee set forth in §1.17(p).

Also, in accordance with the above provisions, please find:

- ☒ A copy of an earlier filed Information Disclosure Statement from a related but earlier filed application containing similar subject matter which may be material to the patentability of this continuation, divisional or continuation-in-part application.

The earlier filed information disclosure statement was submitted for application:

SN 08/236,504	IDS filed June 3, 1996 (INGA,002)
SN 09/169,793	IDS filed Oct. 18, 2000 (INGA,004)
SN 09/169,793	Supplemental IDS filed May 17, 2006 (INGA,004)
SN 09/169,793	2 nd Supp. IDS filed May 30, 2006 (INGA,004)

Applicant hereby requests consideration of the art previously cited on the copies provided.

- ☒ A copy of search reports provided by official examining authorities for applications containing similar subject matter which may be material to the patentability of this application.

The search reports were generated for applications:

PCT/US99/23936	Filed Oct. 12, 1999	(INGA,004/PCT)
PCT/US00/27381	Filed Oct. 4, 2000	(INGA,004/CIP/PCT)
PCT/US99/23933	Filed Oct. 12, 1999	(CRYA,008/PCT)
PCT/US03/13593	Filed Oct. 21, 2003	(CRYA,018/PCT)
PCT/US03/39033	Filed Sept. 8, 2004	(CRYA,023/PCT)
SN 09/397,783	Filed Sept. 16, 1999	(CRYA,008)
SN 10/136,218	Filed May 1, 2002	(CRYA,018)
SN 10/313,828	Filed Dec. 6, 2002	(CRYA,023)
SN 10/453,410	Filed June 3, 2003	(CRYA,025)
SN 10/818,158	Filed April 5, 2004	(CRYA,025/C/CIP)
Written Opinion	PCT/US99/23936	(INGA,004/PCT)
Written Opinion	PCT/US00/27381	(INGA,004/CIP/PCT)
Written Opinion	PCT/US99/23933	(CRYA,008/PCT)
Examination Report	EP 99 950 296.6	(INGA,004/PCT)

Applicant hereby requests consideration of the art cited on the copies provided.

- ☒ An Information Disclosure Statement in accordance with §1.98(a)(1);
- ☒ Legible Copies in accordance with §1.98(a)(2) of:
- (i) each foreign patent;
 - (ii) each publication or that portion which caused it to be listed, other than U.S. patents and U.S. patent application publications unless required by the Office;
 - (iii) for each cited pending unpublished U.S. application, the application specification including the claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion; and
 - (iv) all other information or that portion which caused it to be listed.
- ☐ In accordance with §1.98(a)(3), for documents not in the English language:
- ☐ a concise explanation of the relevance, as it is presently understood by the individual designated in §1.56(c) most knowledgeable about the content of the information, of each patent, publication, or other information listed that is not in the English language;

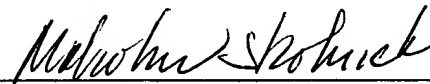
AND,

- ☐ a copy of the translation if a written English-language translation of a non-English-language document, or portion thereof, is within the possession, custody, or control of, or is readily available to any individual designated in §1.56(c).
- ☐ A Check in the amount of the fee set forth in 37 CFR §1.17(p) in accordance with 37 CFR §§1.97(c)(2) and 1.97(d)(2).
- ☒ A Revocation of Power of Attorney with New Power of Attorney and Change of Correspondence Address with New Power of Attorney and Change of Correspondence Address
- ☒ A copy of Statement under 37 CFR 3.73(b) and any required accompanying documents.
- ☒ A stamped, self-addressed Postcard acknowledging receipt of this document and the accompanying documents as listed herein above.

Please return the enclosed postcard, properly date stamped, to the undersigned attorney for Applicant upon receipt of the enclosed correspondence.

In the event a check covering the appropriate fee(s) is not enclosed, is unsigned, or is insufficient in amount, or any other mistake is made by Applicant which should incur additional fees, the Commissioner is authorized to charge Deposit Account No: 50-3748 (INGA,004/CIP) for the amount of any deficiency.

Respectfully submitted,



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ATTORNEY FOR APPLICANT

Date: May 26, 2006

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Application Number: 09/397,782
 Filing Date: September 16, 1999
 First Named Inventor: Charles CONRAD
 Art Unit: 1631
 Examiner Name: James Martinell
 Attorney Docket Number: INGA, 004/CIP



Sheet 1 of 1

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.	Document Number	Publication date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US-5840867	11/24/98	TOOLE, J.J., et al.	
	2	US-5910408	6/8/99	SZOSTAK, et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.	Foreign Patent Document Country Code- Number-Kind Code	Publication date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	3	MOHUCZY, D. et al., <i>Antisense Inhibition of AT1 Receptor in Vascular Smooth Muscle Cells Using Adeno-Associated Virus-Based Vector</i> , Hypertension, pg 354-59, Part II, January 1999	

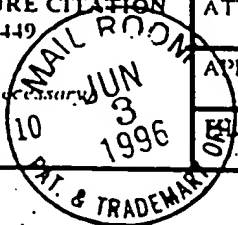
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DATE
CONSIDERED _____

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INFORMATION DISCLOSURE CITATION P.T.O. FORM 1449 (Use several sheets if necessary)	ATTY. DOCKET NO.: IATA.002	SERIAL NO.: 08-236.504
	APPLICANT: Charles A. Conrad	
	FILING DATE: April 29, 1994	GROUP: 1804



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JUN 14 1996

U.S. PATENT DOCUMENTS

GROUP 1800

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER							DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
													YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)

L		Colvin, Richard A., et al., "Structural Features of an RNA Containing the CUGGGA Loop of the Human Immunodeficiency Virus Type 1 Trans-Activation Response Element," Biochemistry 1993, 32, 1105-1112
L		Pollack, Jonathan R., et al., "An RNA Stem-Loop Structure Directs Hepatitis B Virus Genomic RNA Encapsidation," Journal of Virology 3254-3263 (June 1993)
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L		Marvin, D.A., "Filamentous bacterial viruses," Bacteriol. Rev. 33:172 (1969)
EXAMINER		DATE CONSIDERED
J. H. H.		8/22/86

EXAMINER: Initial of reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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INFORMATION DISCLOSURE CITATION P.T.O. FORM 1449 (Page 1 of 3)	ATTY. DOCKET NO.: INGA,004	SERIAL NO.: 09/169,793
	APPLICANT: Charles A. Conrad	
	FILING DATE: October 9, 1998	GROUP: 1646

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>L</i>	5 8 0 8 0 3 6	9/15/1998	Kool	536	24.3	
<i>L</i>	5 4 3 6 1 4 1	7/25/1995	Miyata, et al.	435	91.1	
<i>L</i>	5 3 2 0 9 5 8	6/14/1994	Inouye, et al.	435	194	
<i>L</i>	5 3 1 2 7 2 8	5/17/1994	Lizardi, et al.	435	6	
<i>L</i>	5 2 7 8 0 5 1	1/11/1994	Seeman, et al.	435	91.52	
<i>L</i>	5 2 7 2 0 6 5	12/21/1993	Inouye, et al.	435	91.1	
<i>L</i>	5 2 1 5 8 9 9	6/1/1993	Dattagupta	435	6	
<i>L</i>	5 2 0 8 1 4 9	5/4/1993	Inouye	435	91	
<i>L</i>	5 1 9 0 9 3 1	3/2/1993	Inouye	435	91	
<i>L</i>	5 1 6 2 2 0 9	11/10/1992	Scheele	435	91	
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<i>L</i>	4 3 5 7 4 2 1	11/2/1982	Eintage, et al.	435	68	

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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
<i>L</i>	WO 9 5 3 5 3 6 9	28.12.1995	PCT WO	—	—		
<i>L</i>	WO 9 4 2 3 0 2 6	03.10.1994	PCT WO	—	—		*
<i>L</i>	WO 9 4 2 0 6 3 9	15.09.1994	PCT WO	—	—		
<i>L</i>	WO 9 4 1 3 6 8 9	23.06.1994	PCT WO	—	—		
<i>L</i>	WO 9 4 0 1 5 5 0	20.01.1994	PCT WO	—	—		
<i>L</i>	GB 2 3 1 9 7 7 3	03.06.1998	UK	—	—		
<i>L</i>	0 5 6 2 2 0 6	29.09.1993	Europe EP	—	—		
<i>L</i>	0 5 3 2 3 8 0	17.03.1993	Europe EP	—	—		
<i>L</i>	0 5 3 0 1 1 2	03.03.1993	Europe EP	—	—		

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<i>L</i>		Tanese, Naoko, et al. "Domain structure of the Moloney murine leukemia virus reverse transcriptase: Mutational analysis and separate expression of the DNA polymerase and RNase H activities," <i>Biochemistry</i> , Vol. 85, pp. 1777-1781 (1998). 198F <i>Proc. Natl. Acad. Sci. USA</i>
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<i>L</i>		Sands, Howard, et al. "Biodistribution and Metabolism of Internally 3H-Labeled Oligonucleotides. II. 3',5'-blocked Oligonucleotides," <i>Molecular Pharmacology</i> , Vol. 47, pp. 636-646 (1995).
<i>L</i>		Woolf, Tod M. "To Cleave or Not to Cleave: Ribozymes and Antisense," <i>Antisense Research and Development</i> , Vol. 5, pp. 227-232 (1995).

Applicant's
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INFORMATION DISCLOSURE CITATION P.T.O. FORM 1449 (Page 2 of 3)	ATTY. DOCKET NO.: INGA,004	SERIAL NO.: 09/169,793
	APPLICANT: Charles A. Conrad	
	FILING DATE: October 9, 1998	GROUP: 1646

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TECH CF

		Mirochnitchenko, Oleg, et al. "Production of single-stranded DNA in mammalian cells by means of a bacterial retron," The Journal of Biological Chemistry, Vol. 269, No. 4, pp 2380-2383 (1994).
L		Inouye, Sumiko, et al. "The retron: a bacterial retroelement required for the synthesis of msDNA," Current Biology, pp 713-718 (1993).
L		Colvin, Richard A., et al. "Structural Features of an RNA Containing the CUGGGA Loop of the Human Immunodeficiency Virus Type 1 Trans-Activation Response Element," Biochemistry, Vol. 32, No. 4, pp. 1105-1112 (1993).
L		Pollack, Jonathan R., et al. "An RNA Stem-Loop Structure Directs Hepatitis B. Virus Genomic RNA Encapsidation," Journal of Virology, Vol. 67, pp. 3254-3263 (1993).
L		Silver, Jonathan, et al. "An RT-PCR assay for the enzyme activity of reverse transcriptase capable of detecting single virions," Nucleic Acids Research, Vol. 21, No. 15, pp. 3593-3594 (1993).
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L		Gao, Wen-Yi, et al. "Phosphorothioate Oligonucleotides Are Inhibitors of Human DNA Polymerases and RNase H: Implications for Antisense Technology," Molecular Pharmacology, Vol. 41, pp. 223-229 (1992).
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L		Nag, Dilip K., et al. "Seven-Base-Pair Inverted Repeats in DNA Form Stable Hairpins in Vivo in Saccharomyces cerevisiae," Genetics, Vol. 129, pp. 669-673 (1991).
L		Vickers, T., et al. "Inhibition of HIV-LTR gene expression by oligonucleotides targeted to the TAR element," Nucleic Acids Research, Vol. 19, No. 12, pp. 3359-3368 (1991).
L		Xodo, L.E., et al. "DNA hairpin loops in solution. Correlation between primary structure, thermostability and reactivity with single-strand-specific nuclease from mung bean," Nucleic Acids Research, Vol. 19, No. 7, pp. 1505-1511 (1991).
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L		Merchinsky, Michael, "Resolution of Poxvirus Telomeres: Processing of Vaccinia Virus Concatamer Junctions by Conservative Strand Exchange," Journal of Virology, Vol. 64, No. 7, pp. 3437-3446 (1990).
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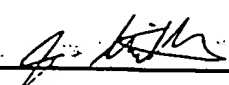
[Signature] 5/3/01

INFORMATION DISCLOSURE CITATION P.T.O. FORM 1449 (Page 3 of 3)	ATTY. DOCKET NO.: INGA,004	SERIAL NO.: 09/169,793
	APPLICANT: Charles A. Conrad	
	FILING DATE: October 9, 1998	GROUP: 1646

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OCT 25 2000

OTHER DOCUMENTS, Continued (Including Author, Title, Date, Pertinent Papers, Etc.)

✓			Maher, Louis J. III, et al. "Inhibition of DNA Binding Proteins by Oligonucleotide-Directed Triple Helix Formation," Science, Vol. 245, pp. 725-730 (1989).
✓			Chomczynski, Piotr, et al. "Single-Step Method of RNA Isolation by Acid Guanidinium Thiocyanate-Phenol-Chloroform Extraction," Analytical Biochemistry, Vol. 162, pp. 145-159 (1987).
✓			Vieira, Jeffrey, et al. "Production of single-stranded plasmid DNA," Methods in Enzymology, Vol. 153, pp. 3-11 (1987).
✓			Nobile, Carlo, et al. "Stable Stem-Loop and Cruciform DNA Structures: Isolation of Mutants with Rearrangements of the Palindromic Sequence at the Simian Virus 40 Replication Origin," Intervirology, Vol. 25, pp. 158-171 (1986).
✓			Darnell, James E., et al. Molecular Cell Biology (Scientific American Books, Inc., New York, NY), pp. 438-440 (1986).
✓			Baumann, Ulrich, et al. "Conformational analysis of hairpin oligodeoxyribonucleotides by a single-strand-specific nuclease," Eur. J. Biochem., Vol. 161, pp. 409-413 (1986).
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✓			Land, Hartmut, et al. "5'-Terminal sequences of eucaryotic mRNA can be cloned with high efficiency," Nucleic Acids Research, Vol. 9, No. 10, pp. 2251-2266 (1981).
✓			Shinnick, Thomas M., et al. "Nucleotide sequence of Moloney murine leukemia virus," Nature, Vol. 293, pp. 543-548 (1981).
✓			Herrmann, Richard, et al. "Conversion of bacteriophage fd into an efficient single-stranded DNA vector system," Mol. Gen. Genet. Vol. 177, pp. 231-242 (1980).
✓			Donis-Keller, Helen. "Site specific enzymatic cleavage of RNA," Nucleic Acids Research, Vol. 7, No. 1, pp. 179-192 (1979).
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✓			Toulmé, Jean-Jacques, et al. "Selecting, preparing and handling antisense oligodeoxyribonucleotides," Source and date of publication unknown, pp. 39-74.
EXAMINER			DATE CONSIDERED
			5/3/01

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
 PTO-1449 Patent and Trademark Office-U.S. Department of Commerce (Modified)

004/supp.

**SUPPLEMENTAL
INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

Sheet 1 of 2

Application Number: 09/169,793
 Filing Date: Oct. 9, 1998
 First Named Inventor: Charles CONRAD
 Art Unit: 1631
 Examiner Name: James Martinell
 Attorney Docket Number: INGA, 004

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.	Document Number	Publication date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US-5714323	02-1998	OHSHIMA, A., INOUE, et al.	
	2	US-5756291	05-1998	GRIFFIN, et al.	
	3	US-5807718	09-1998	JOYCE, G.F. and BREAKER, R.R.	
	4	US-5503978	04-1999	SCHNEIDER, et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.	Foreign Patent Document Country Code- Number-Kind Code	Publication date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	5	WO-9529993	11/9/95	NABEL, G.J., et al.	

NON PATENT LITERATURE DOCUMENTS

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**SUPPLEMENTAL
INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

Sheet 1 of 2

Application Number: 09/169,793
 Filing Date: Oct. 9, 1998
 First Named Inventor: Charles CONRAD
 Art Unit: 1631
 Examiner Name: James Martinell
 Attorney Docket Number: INGA, 004

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SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Examiner Initials*	Cite No.	Document Number	Publication date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

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	2	BREAKER, R.R., <i>In Vitro Selection of Catalytic Polynucleotides</i> , Chem. Rev., 97: 371-90, 1997	

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